

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a first layer configured to manage the physical resource and to guarantee a quality of service, wherein access to the physical resource is divided into transmission time intervals;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of the transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data,  
wherein the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference.

2. (Currently Amended) The system of claim 1, wherein the first layer determines a plurality of sizes of the transmission units for the transmission time intervals and the second and sub-layer selects one of the plurality of sizes according to the transmission conditions, the second sub-layer selecting a smaller one of the plurality of sizes when the transmission conditions on the physical resource are degraded.

3. (Currently Amended) The system of claim 1, wherein the first layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer.

4. (Currently Amended) The system of claim 3, wherein the first layer reduces the size of each of the transmission units when the transmission conditions on the physical resource are degraded.

5. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein

the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

6. (Canceled)

7. (Currently Amended) The system of claim 1 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

8. (Previously Presented) A UMTS mobile telephony system using the system of claim 1.

9. (Currently Amended) The system of claim 2, wherein the first layer supplies to the second sub-layer the plurality of sizes by means of a table.

10. (Currently Amended) The system of claim 4, wherein the first layer adjusts the plurality of sizes of the transmission units by sending a table to the second sub-layer.

11. (Currently Amended) The system of claim 2 wherein  
~~the layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,~~

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

12. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein the first layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer, wherein

the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

13. (Currently Amended) The system of claim 4 wherein

~~the layer guarantees the quality of service by assigning a set level to the ratio of~~

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~~received signal power to noise plus interference,~~

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

14. (Currently Amended) The system of claim 5, wherein the first layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

15. (Currently Amended) The system of claim 11, wherein the first layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

16. (Currently Amended) The system of claim 12, wherein the first layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

17. (Currently Amended) The system of claim 13, wherein the first layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

18. (Currently Amended) The system of claim 2 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

19. (Currently Amended) The system of claim 3 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

20. (Currently Amended) The system of claim 4 wherein the first layer is configured

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to retransmit the transmission units if acknowledgement is not received.

21. (Currently Amended) The system of claim 5 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

22. (Canceled)

23. (Currently Amended) The system of claim 11 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

24. (Currently Amended) The system of claim 12 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

25. (Currently Amended) The system of claim 13 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

26. (Currently Amended) The system of claim 14 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

27. (Currently Amended) The system of claim 15 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

28. (Currently Amended) The system of claim 16 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

29. (Currently Amended) The system of claim 17 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.